Attorney Docket No. 5550-31

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application for:

First Named Inventor: ALEX TZANNES — **Art Unit: 2624**

Appln. No.: 10/611,950 — **Examiner: ROSARIO, D.**

For: ITERATIVE COMPRESSION PARAMETER CONTROL TECHNIQUES FOR IMAGES — **Confirmation No.: 5413**

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REQUEST FOR RECONSIDERATION AFTER FINAL

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office action of August 14, 2007, reconsideration on the merits is respectfully requested.

Applicants respectfully repeat their assertion that claims 73-91 are in full compliance with all aspects of 35 U.S.C. § 101. Should the examiner believe the claims are not in compliance with 35 U.S.C. § 101, the Examiner is respectfully requested to elaborate why with reference to the Utility Guidelines. Withdrawal of the rejection is thus hereby requested.

The independent Claims recite that the one or more parameters are iteratively adapted and that they include at least one truncation parameter.

Neither Lubin nor Mukherjee teach, suggest or disclose this feature.

The Final Office Action asserts that:

> Lubin discloses one or more parameters ("parameters" in col. 9, line 3) are iteratively adapted ("iterative... adaption" in col. 9, lines 1-3) and they include at least one truncation parameter ("reduce the ... error" in col. 9, line 3). Thus, the parameters are adaptively iterated to reduce errors; and
>
> Mukherjee discloses one or more parameters (or target block size in fig. 2S1 as determined upon the output of fig. 1, num. 21) are iteratively adapted (in fig. 2:S2

> that is described in the context of "iterations" in col. 5, line 11 wherein the iterations are used to "adjust" in col. 2, line 58 or adapt the target block size or "target memory" in col. 2 line 58 as shown in fig. 1, num 21:ACCUMULATOR) and they include at least one truncation parameter (or a truncation decision step, fig. 4:S23, that determines whether to use truncation coding, BTC-VQ.)

The independent claims are directed toward iterative adaption of compression parameters.

In contrast in Lubin, as discussed on col. 8, beginning on line 46, the parameters relied upon by the office Action are for *training* of the neural network. Specifically, Lubin states:

> The below discussion for *training a NN* to replace the quality metric generator can be followed to generate an analogous process to *train a NN to replace the controller*. In order to *train a NN* as a low complexity video quality metric generator, a large database is generated to collect the decompressed video sequences and their perceived fidelity (as calculated by an already known, possibly more complex video quality metric generator).
>
> The encoder loop in FIG. 8 generates this database of decompressed video sequences and quality ratings. Note that the NN could alternatively be trained directly on ratings of video sequences obtained in experiments using human subjects. For each of the video sequences in the database, the NN computes a metric (labeled "NN output" in FIGS. 7 & 8), given the "current state" of its parameters. An error is generated by subtracting the NN output from the target metric (labeled "desired output" in FIGS. 7 and 8 via subtractors 720 and 820) as calculated by the known metric. Next, the NN parameters are adapted such that the error would be reduced if the video sequence (database) was presented again to the NN. *This iterative process (the training phase) continues until it is no longer possible to reduce the NN output error by adaptation of its parameters*. If the error is acceptably small, the ***NN can now serve as a computational device to measure video quality***. Once the NN has been completely trained, the subtractors in FIGS. 7 and 8 are removed, and the NN is substituted for the appropriate component in the QME system, forming one of the NN-QME systems shown in FIGS. 4-6. (Emphasis Added)

It is thus abundantly clear that Lubin's parameters are **not** used for compression as claimed.

As recited in, for example, Independent Claim 1, "the compression parameter module iteratively adapting the one or more parameters used on the first image for compression of a next image."

In Mukherjee, while data compression is discussed, it is in reference to block-by-block image analysis and compression, where the compression rate is fed back for use in the next iteration as discussed on col. 7 in relation to step S23.

However, Mukherjee appears to fail, teach, suggest or disclose iteratively adapting the one or more parameters used on the first image for compression of a *next image* since Mukherjee operates on a block-by-block basis.

The dependent claims are further distinguishable at least based on the above reasons and the feature(s) recited therein.

It is believed that application is in condition for allowance. Should the Examiner believe anything further is needed to place the application in even better condition for allowance the examiner is invited to contact applicant's undersigned representative at the number listed below.

The Commissioner is hereby authorized to charge to deposit account number 19-1970 (5550-31) any fees under 37 CFR § 1.16 and 1.17 that may be required by this paper and to credit any overpayment to that Account. If any extension of time is required in connection with the filing of this paper and has not been separately requested, such extension is hereby petitioned.

Respectfully submitted,

Date: 11 Jan '08

By: _____
Jason H. Vick
Reg. No. 45,285

SHERIDAN ROSS P. C.
1560 BROADWAY, SUITE 1200
DENVER, COLORADO 80202
TELEPHONE: 303-863-9700
FAX: 303-863-0223